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A similar deviation from the parabolic figure is presented in the outlines of the head of the Comet of July, 1861, and in numerous other instances. The strongest case of divergence occurs in the singularly well-defined contour of the external envelope of the Comet of June, 1860.

Five hundredth meeting.

November 13, 1861. — STATUTE MEETING.

The PRESIDENT in the chair.

The Corresponding Secretary read various letters of acknowledgment of the reception of recent publications of the Academy.

The President presented a letter from the Standing Committee of the Boston Athenæum, offering a renewal of the lease held by the Academy for three years ensuing. Voted, that the Finance Committee be empowered to renew the lease upon the terms offered.

Professor Eustis having declined to serve upon the Rumford Committee, Professor William B. Rogers was nominated and appointed to fill the vacancy.

Jules Marcou, of Boston, was elected a Fellow of the Academy, in Class II. Section 1.

Ezra Abbot, of Cambridge, in Class III. Section 2.

Truman H. Safford, of Cambridge, in Class I. Section 2.

Hon. Benjamin F. Thomas, in Class III. Section 1.

Chief Justice George T. Bigelow, of Boston, in Class III. Section 1.

The following, nominated by the Council, were elected Associate Fellows: —

J. M. Gilliss, U. S. N., Director in charge of the Naval Observatory, Washington, in Class I. Section 2.

J. M. Ordway, of Manchester, New Hampshire, in Class I. Section 3.

Professor James Hadley, Jr., of Yale College, in Class III. Section 2.

Dr. F. S. Holmes, of Charleston, South Carolina, in Class II. Section 1.

The following, nominated by the Council at the Annual Meeting, were elected Foreign Honorary Members: —

Professor Bekker, of Berlin, in Class III. Section 2.

Professor Trendelenberg, of Berlin, in Class II. Section 1.

Captain Duperrey, of Paris, in Class II. Section 1.

Professor Peirce read a paper by Captain Anderson, of the British Mail Steamer Canada, upon a general plan of education for seamen, and their training in making scientific observations and collections. The advice and co-operation of the Academy being requested, a committee on the subject was appointed, consisting of Messrs. J. I. Bowditch, Felton, Agassiz, Rogers, Peirce, Lovering, A. Gray, J. Wyman, and C. W. Eliot.

Professor Agassiz presented a paper, entitled, Contributions to the Natural History of the Acalephs of North America.

Professor Bowen read the second and concluding portion of a paper On Specie Reserves and Bank Deposits.

Professor Gray presented the following communications, viz.: —

1. *Notes upon a Portion of Dr. Seemann's recent Collection of Dried Plants gathered in the Feejee Islands. By* Asa Gray.

Dr. Berthold Seemann, who, as the naturalist of a former expedition in the Pacific of the British surveying ship Herald, had acquired a high reputation in scientific exploration, has recently visited the Feejee Islands, under a commission from the British government, to examine the productive resources and capabilities of that interesting group of islands. While attending to this duty he was able to gather specimens of above eight hundred and fifty species of dried plants; and a list of them, with such determinations as he could hastily make, was published by him, in the number for the 15th of September last of the well-known botanical periodical, the Bonplandia, of which Dr. Seemann is the editor. It being very desirable that this collection should be critically compared with that made by the Pacific Exploring

Expedition under Captain Wilkes, the Phænogamous portion of which has mainly been elaborated by me, Dr. Seemann kindly communicated to me as full a set as possible of the plants he collected. Having collated the portion belonging to the orders which have been elaborated and published by me, I here offer some brief notes upon that portion of Dr. Seeman's collection, — following the order of his list, and mentioning only those species which suggest some remark.

No. 4. "*Polyalthia Vitiensis*, Seem." was not supplied to me; and, on the other hand, Dr. Seemann does not enumerate my *Richella monosperma* nor *Uvaria amygdalina.*

12. "*Agatea violaris*, A. Gray," is the var. β of this interesting species, a form with still broader leaves.

23. "*Hibiscus Storckii*, Seem." appears not to be sufficiently distinct from *H. Rosa-Sinensis.*

24. "*Paritium purpurascens*, Seem." The living plants may furnish good characters to distinguish this from *P. tiliaceum*, but they are not apparent in the dried specimen supplied.

39. "*Grewia Mallococca*, Linn. f." The specimen accords with *G. persicæfolia*, Gray, Bot. Expl. Exped., which, however, may be only a variety of Forster's species.

41. "*Trichospermum Richii*, Seem." = *Diclidocarpus Richii*, Gray, l. c., Mr. Bentham having shown that the latter belongs to Blume's little-known genus, which was wrongly placed in the *Flacourtiaceæ*, and so overlooked.

45. "*Ternstrœmiacearum*, nov. gen. Seem." There is nothing answering to this in the American collection.

47. "*Calophyllum polyanthum*, Wall.?" = *C. spectabile*, Bot. Expl. Exped. Our specimen from the Mangsi Islands must be Miquel's *C. dasypodum;* and all are perhaps *C. lanceolatum*, Bl.

46. "*Calysaccion obovale*, Miq." To this apparently belongs the foliage which I had referred to *Garcinia Mangostana.*

50. "*Garcinia* (*echinocarpa?*)" is in the American collection too imperfect for determination.

53. "*Pittosporum Pickeringii?*" is that species, apparently, although it is in fruit, while the American collection has flowering specimens only, and with much longer peduncles.

54. "*P. Richii?*" (in fruit only) appears to be that species.

55. "*P. Brackenridgei.*" This is not our plant, but answers to *P. Richii* in the flowering state.

56. "*P. tobiroides.*" Not our species of that name, but it is our *P. Brackenridgei.*

59. "*Aglaia? basiphylla.*" This is by no means that species, but it accords with an imperfect specimen (with young fruit only) mentioned in the Bot. Expl. Exped., p. 238. Perhaps it is a mere variety of Seemann's no. 60, *A. edulis.*

67. "*Cupania apetala,* Labill." The foliage resembles that of *C. leptobotrys,* Gray, but the inflorescence and fruit are different, and accord with Labillardiere's plate.

68. "*Cupania Vitiensis,* Seem." is doubtless a broad-leaved form of *C. falcata,* Gray, l. c., and of Seemann's no. 70.

73. I have not seen.

74 = 69. *Cupania rhoifolia,* Gray.

76. "*Vitis saponaria,* Seem." is the same as *Cissus geniculata?* of our collection from the Feejees.

79. "*Smythea Pacifica,* Seem. gen. nov." To all appearance this is a *Ventilago,* with a particularly broad fruit. This is only partly grown in the specimen communicated,* which differs from my *V. Vitiensis* in the pubescent flowers crowded in sessile fascicles. M. Tulasne's *V. cernua,* from Rawak, excepting "stylo in basi pubente," well accords with *V. Vitiensis,* of which the fruit alone can determine whether Bentham's *V. leiocarpa* is really distinct, the difference in the inflorescence being unreliable.

81. "*Alphitonia zizyphoides*" is that species, which Remy collected in the Sandwich Islands also. My *A. franguloides* is evidently a mere variety of it.

82. "*Gouania Richii*" is probably that species; but the fruit in Seemann's specimen is less winged, and there are other slight differences.

83, 84. Destitute of flowers and fruit, and altogether dubious.

85. "*Rhamnea*" appears to be an undescribed *Colubrina.*

90. "*Melicope?*" is a form, with narrower leaflets, of what I had called *Euodia drupacea,* Labill.?

102. "*Zanthoxylon varians,* Benth." is perhaps my *Acronychia heterophylla,* without flowers or fruit.

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* Dr. Seemann's plate of this plant in a later number of the Bonplandia shows nothing inconsistent with this opinion, unless the figures 7 and 8 are intended to represent a fruit dehiscent in the manner of *Hippocratea.*

107. "*Tephrosia purpurea*, Pers." Also *T. piscatoria*, Pers.

113. "*Stronglodon ruber*, Vog." is interesting as making known the fruit of this plant, an oval and turgid legume, with two large seeds like those of *Canavalia.*

123. "*Rhynchosia minima*" is not that species, nor of the genus, having a pluriovulate ovary and I believe monadelphous stamens. It is probably a *Hedysarea.*

127. "*Pongamia piscatoria*, Seem." is *Derris uliginosa*, Benth.

133. "*Storckiella Vitiensis*, Seem. gen. nov." is entirely new to us, and not in the American collection.

156. "*Eugenia confertiflora*" is hardly the plant of the American Expedition, the leaves being larger and less pale beneath, the flowers apparently larger, the calyx-tube longer and striate-angled. But the materials for complete comparison are wanting.

162. "*E. rivularis*, Seem." does not well agree with any of ours; and the same may be said of 163, an unnamed *Eugenia.*

166. "*Nelitris fruticosa*," as to the specimen furnished, is *N. Vitiensis.*

168. "*Acicalyptus myrtoides*," completely as it accords in foliage with our plant of that name, is very different in the flower-buds, and somewhat so in the inflorescence. The characters of the two species may be expressed thus: —

A. myrtoides (Gray, Bot. Pacif. Exped., 1. p. 551, t. 67): alabastris elongato-oblongis acute quadrangulatis, operculo subulato; floribus deplanato-cymosis plerisque pedicellatis.

A. Seemanni (*A. myrtoides*, Seem. non Gray): alabastris clavatis inferne tantum tetragonis, operculo late conico breviter apiculato; floribus subthyrsoideo-cymosis plerisque sessilibus iis *A. myrtoidis* multo minoribus.

170, 171. "*Metrosideros*" seem to be only slender forms of 169, which is *M. collina*, Gray, but of the var. *glaberrima.*

172. "*Memecylon Vitiense*" is the var. β. of our collection.

173. "*Astronia Pickeringii*" is not that plant, but, as well as can be made out from the incomplete fruiting specimen, *Astronidium parviflorum*, Gray.

177. "*Medinilla*" accords with the specimen of *M. rhodochlæna*, Gray. Seemann's 175, so named, was not communicated, nor was 178.

181. "*Melastomacea.*" This, with fruit only, accords with some undetermined foliage in the American collection.

182. "*Melastomacea*," seemingly a *Medinilla*, is none of ours.

184. "*Crossostylis biflora*, Forst." is by no means that plant, but a new species of our allied genus. It should bear the name of

Haplopetalon Seemanni: a *H. Richii* differt foliis majoribus obovatis subtus cum ramis novellis molliter pubescentibus; alabastris hirsutis; calycis segmentis petalisque sæpius 5; styli lobis 7.

196. "*Spiræanthemum Vitiense*" is not that species, but apparently a new one, much nearer *S. Samoense*.

198. "*Weinmannia*" is new to our collection, unless it be a variety of 197, *W. affinis*, of which 199 and 200 are obviously mere varieties.

206. "*Plerandra Pickeringii*" is hardly that species, but appears to be identical with 209, a new species of *Plerandra*. I have no specimen of 207.

208. "*Araliacea*" is also polyandrous, and is a remarkable new *Plerandra*, if its separate stigmas or short styles will allow.

213. "*Calycosia Milnei*, A. Gray," is the species described under that name in the Proceedings of the Academy, 4, p. 307, but with longer leaves. Drupe pyriform.

215. "*Dolicholobium longissimum*, Seem." may be a good species, but is not unlikely to be a variety of *D. latifolium*, Gray, with less ample leaves more downy underneath. The specimens of the two are not complete or full enough to settle this question.

216. "*Myrmecodia Vitiensis*, Seem.," is evidently *Hydnophytum longiflorum*, Gray, l. c., with shorter leaves.

217. "*Lindenia Vitiensis*, Seem." was not met with in the American Expedition.

218. "*Gardenia Vitiensis*, Seem." This is quite different from the only *Gardenia* from the Feejee Islands in our collection, that being a small-leaved form of *G. Taitensis*.

220. "*Canthium Harveyi*" is not at all the species published under that name, but apparently a form of 221, *C. lucidum*, Hook. and Arn.

223. "*Morinda*" is *M. myrtifolia*, Gray, l. c., with larger leaves; perhaps a mere variety of *M. umbellata*.

224. "*M. sp. fol. pubescentibus*," not communicated, is probably *M. mollis*, Gray, l. c.

226. "*M. phillyreoides*, Labill." was not communicated. There is nothing answering to that species in the American collection.

236. "*Stylocoryne corymbosa*, Labill." is *Psychotria Forsteriana β. Vitiensis*, Gray, l. c.

240. "*Randia?*" Not in the American collection. Perhaps a *Gynopachys* or *Griffithia.*

243. "*Psychotria calycosa,* A. Gray," is not that species, but *P. macrocalyx,* Gray, l. c.

246. "*P. Vitiensis,* Seem." is *P. calycosa,* Gray, but with the limb of the calyx less lobed.

247. "*P.? speciosa,* Forst." It may be that plant and *Cephælis fragrans,* Hook. and Arn., but the character fails to accord. Certainly it is no *Psychotria,* and is *Ixora* (*Phylleilema*) *Vitiensis,* Gray, l. c.

248. "*Psychotria.*" Foliage only, not identified.

249. = *P. platycocca,* Gray, the inflorescence undeveloped.

250. = *P. insularum,* Gray, probably; the materials scarcely sufficient.

251. = *P. Pickeringii,* Gray.

252. = *P. Pickeringii,* a narrow-leaved variety, or else an allied new species.

253. "*Psychotria*" is apparently a new species, very much like *P. filipes* (the fruit of which is unknown); but the calyx is truncate.

254. = 244 in flower, viz. "*P. collina,* Labill.," which it well may be.

255. "*P.* aff. *P. turbinatæ,* A. Gray," is new to me, and more like *P. Brackenridgei,* Gray, the flowers of which are unknown. The long corolla of the present species is quite unlike the other Oceanic species.

256. "*Rubiacea,* n. gen.?" is probably a *Canthium,* near *C. lucidum.*

257. "*Vangueria?*" Flower-buds too young for investigation. It resembles, but is not identical with, *Guettarda* (*Guettardella*) *Vitiensis,* Gray, ined., of which the fruit only is known.

258. "*Psychotriacearum,* gen. nov." Although the corolla is wanting, the plant may be confidently referred to *Ixora.*

259. "*Rubiacea,* gen. nov.?" Apparently a *Psychotria,* in flower only, near *P. Brackenridgei,* Gray, which is known only in fruit.

260. "*Rubiacea.*" New to me: — perhaps a *Griffithia.*

261. "*Erigeron Bonariensis,* Linn." In my view the original *E. Bonariense* of Linnæus, or Dillenius, is the *E. spiculosus,* Hook. & Arn., and *E. spinulosum,* DC. The present plant is *Erigeron albidum,* Gray, ined., the well known *Conyza albida,* Willd., *C. erigeroides,* DC., *C. floribunda,* H. B. K., &c.

268. "*Wollastonia strigulosa,* DC." This is rather *W. Forsteriana,* DC., which should include *W. insularis,* and has awnless achenia and

the involucre shorter and more imbricated (the scales ovate or oblong and obtuse) than *W. strigulosa*, DC. which (in part), along with *W. scabriuscula*, *glabrata*, and *canescens*, DC., I refer to *W. biflora.*

300. "*Geniostoma crassifolium*, Benth." is also *G. rupestre* var. *puberulum*, Gray, in Proceed. Amer. Acad. 4, p. 321, a form of 301.

304. "*Gærtnera*, sp." is a new *Geniostoma*, with small leaves.

303. "*Gærtnera pyramidalis*, Seem." is *Couthovia corynocarpa*, Gray.

305. "*G. barbata*, Seem." is a *Couthovia*, which, if truly distinct from the preceding, should be named *C. Seemanni.* The materials collected by Dr. Seemann, comprising flowers and fruit, confirm the genus *Couthovia*, and fix its position in the vicinity of *Strychnos*, calling, however, for some extension of the character of Bentham's third tribe. There are indications of dimorphism, or incipient difference in sex, in the flowers examined. Some corollas of *C. corynocarpa* are beardless, or nearly so, and have the anthers almost sessile in the throat, while others of the same cyme are conspicuously bearded in the throat, and their equally subexserted anthers are borne on filaments of their own length, inserted some way down on the tube. The style is sometimes slender and exserted, sometimes shorter or very short; the ovary in the latter is certainly fertile.*

306. "*Fagræa viridiflora*, Seem." This wholly accords with *F. gracilipes*, Gray, l. c., which was thought to have white or cream-colored corollas.

307. "*Fagræa Vitiensis*, Seem." is not in the collection of the American Expedition.

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* COUTHOVIA, Gray, Bot. Amer. Expl. Exped., ined., & Proceed. Amer. Acad. 4, p. 324.

Calyx quinquepartitus, segmentis imbricatis rotundatis crassis, marginibus tenuibus. Corolla brevis, quinquefida, æstivatione valvata. Stamina 5, tubo vel fauci inserta: filamenta brevia vel brevissima: antheræ oblongæ. Ovarium biloculare, ovatum, stylo apiculatum: stigma subcapitatum, bilobum. Ovula in placentis medio dissepimento adnatis plurima, amphitropa. Fructus clavatus, drupaceus, basi attenuatus, sarcocarpio tenui, putamine lignoso percrasso, 2-1-loculari, 2-1-sperma. Semina . . . . . Arbores Vitienses, glabri, stipulis *Labordeæ*, foliis subcoriaceis penninerviis obovatis, cyma terminali e radiis 2-4 apice multifloris, floribus parvis haud pedicellatis, corolla fere *Strychnarum* breviflorarum.

1. C. CORYNOCARPA: calycis segmentis ciliolatis; antheris oblongis utrinque emarginatis.

2. C. SEEMANNI: calycis segmentis margine glaberrimis; antheris subsagittatis; corolla fauce eximie albo-lanata, an semper? An forma præcedentis?

The remaining Monopetalæ will be annotated, when needful, in the following article.

2. *Characters of New or Obscure Species of Plants of Monopetalous Orders in the Collection of the United States South Pacific Exploring Expedition under Captain Charles Wilkes, U. S. N. With occasional Remarks, &c.* By Asa Gray.

Characters of the new or more interesting *Compositæ*, *Lobeliaceæ*, and *Scævoleæ* of this collection were communicated to the Academy a year ago, and printed in the Proceedings, Vol. V. p. 115, *et seq.* The *Rubiaceæ* and *Loganiaceæ* were similarly discussed at earlier periods (Proceedings, Vol. IV., April, 1858, and September, 1859).

Calycereæ.

Boopis crassifolia (*Acicarpa crassifolia*, Miers in Ann. & Mag. Nat. Hist. 1860, p. 402): glaberrima; caule (spithamæo ad pedalem) ramoso adscendente; ramis ad apicem usque foliosis; foliis carnosis, caulinis sessilibus plerumque subamplexicaulibus lanceolatis seu lingulatis repando-denticulatis; capitulis breviter pedunculatis; involucro subcarnoso alte 5–7-fido, segmentis oblongis; filamentis vix basi monadelphis; acheniis fere pentapteris; calycis lobis maturis scarioso-cartilagineis dorso eximie carinatis intus concavis margine tenui eroso-denticulatis pl. m. difformibus, nunc late triangulari-ovatis acutis brevibus, nunc ovato-lanceolatis vel subulatis achenium dimidium adæquantibus; paleis receptaculi filiformibus apice spathulatis. — Rio Negro, North Patagonia, on the sandy shore. — I do not remember the state of Tweedie's specimen (from Maldonado) in the Hookerian herbarium, with which ours was long since compared. But probably it is not in fruit; else Mr. Miers would not have referred to *Acicarpha* a plant in which the calyx-lobes are certainly paleaceous and (although the narrower ones are rigid) not spinescent, and the achenia not at all concreted. He would more probably have found a place for it in his genus *Anomocarpus*, formed of some species of *Calycera*. Although I refer it to *Boopis*, notwithstanding some difformity in the calyx-lobes of different flowers, and the approach to a subulate character in the narrower ones, I am inclined to think that even *Boopis* is likely to be reduced to a mere section of the original genus *Calycera*.

Mr. Miers has adopted Brown's very qualified recommendation to change the orthography of Jussieu's *Acicarpha* to *Acicarpa*. But surely *carpha* may as well refer to calycine as to bracteal chaff, and the substituted name has no great advantage in etymological appropriateness.

Valerianaceæ.

VALERIANA PYCNANTHA (sp. nov.): herbacea, glaberrima, nana, multiceps e caudice crasso; foliis carnosis haud ciliatis, radicalibus lineari-spathulatis, caulinis 2 vel 3 verticillatis oblongis sessilibus versus medium scapi simplicissimi 1–4-pollicaris; floribus scarioso-bracteatis in capitulum demum oblongum arcte congestis; acheniis anguste ovato-oblongis lateribus enerviis; pappo 5–7-radiato, setis basi connatis. — Alpamarca, high Andes of Peru.

VALERIANA GLOBULARIS (sp. nov.): herbacea, depressa, cæspitosa, glabra; caudice crasso; foliis omnibus radicalibus subcarnosis anguste spathulatis vel sublinearibus basi attenuatis integerrimis; scapo nudo 1–3-pollicari capitulum globosum scarioso-bracteatum gerentibus; acheniis ovalibus lateribus enerviis; pappo 10–12-radiato, setis basi connatis. — Var. scapo brevissimo. — Casa Cancha, high Andes of Peru.

VALERIANA RHIZANTHA (sp. nov.): glabra; radice crassa fusiformi foliis rosulatis spathulato-rotundatis carnosis capitulum florum arcte sessile depressum circumdantibus coronata; pappo cupulato brevissime 5-radiato, radiis dentiformibus nudis per anthesin involutis. — Alpamarca, high Andes of Peru. "Succulent and said to be esculent; root fusiform," very large; "leaves an inch in length and breadth, obtuse, surrounding a central cake of flowers, all even at the surface and densely congested." Pickering, adn. Bracts scarious, not connate. Setæ of the pappus reduced to short, dentiform, naked processes on the border of a cup like that of many Valerians, within which they are inrolled in the usual manner. So that this species militates strongly against Persoon's genus *Phyllactis*, as recently restored and extended by Weddell.

Ericaceæ.

VACCINIUM MADERENSE, Link, and the allied *V. Arctostaphylos*, enumerated by Klotzsch (in Linnæa, 24, p. 65) among the "*non satis notæ*," having simply five-celled berries, awnless anthers, and at length campanulate corollas, belong to the section *Vitis-Idæa*, notwithstanding their deciduous leaves.

VACCINIUM CEREUM, Forst., of Tahiti, appears to me specifically distinct from the following, of the Sandwich Islands, which Chamisso and Schlechtendal, and afterwards Sir William Hooker, have combined with it. *V. cereum*, besides its more urceolate corolla, has shorter and bibracteolate peduncles, acute calyx-lobes, the anthers mucronulate at the base and their tubular horns not much surpassing the dorsal awns. The Sandwich Island *Vaccinia* have ebracteolate pedicels; and their very various and diverse forms appear to be reducible to two species, as follows: —

VACCINIUM RETICULATUM, Smith (*V. cereum*, Cham. & Schlecht. and Hook. Ic. Pl. t. 87), — the *Ohelo* of the Hawaians, — an extremely polymorphous species. Its anthers are wholly muticous at the base, the corolla cylindraceous when fully developed, and much exceeding the obtuse lobes of the calyx. A small-leaved and lucid form of it is *V. Macrœanum* of Klotzsch, which differs little from

Var. DENTATUM (*V. dentatum*, Smith), in which the corolla is sometimes shorter.

Var. CALYCINUM, the *V. calycinum*, Smith, described as having deciduous leaves, appears to be only a thinner-leaved form of *V. reticulatum*, growing in the shade of thick forest, and is connected with the ordinary state by various intermediate forms, among which is *V. Meyenianum*, Klotzsch. The dorsal awns of the anthers are sometimes very short or obsolete.

Var.? LANCEOLATUM, from the tabular summit of Kauai, is quite uncertain, the flowers being unknown; but it resembles the var. *dentatum*, except that the leaves are nearly lanceolate.

VACCINIUM PENDULIFLORUM, Gaud. is distinguished, not so much by its longer peduncles drooping in fruit and narrower acutish calyx-lobes, as by the shorter, nearly campanulate corolla, not much exceeding the calyx, and a strong cusp at the base of the anther. This last is represented in fig. 4 of Gaudichaud's plate, but is not referred to in the diagnosis, nor noticed by Dunal. Our collection (which has a form of *V. reticulatum* with equally long and pendulous peduncles) has of this species only the

Var. BERBERIFOLIUM: foliis obovatis seu obovato-oblongis eximie reticulatis margine dentibus spinuloso-setaceis crebris pulcherrime pectinatis; pedunculis folia vix excedentibus. — E. Maui, on Mouna Haleakala, and apparently on the mountains of Oahu. Anther bearing at its base a cusp or strong mucro, like that represented in Gaudichaud's figure of the anther of *V. penduliflorum.* Striking as are the very reticulated and spinulosely-serrate, Barberry-like leaves, these are not diagnostic of the species, since the teeth are not prolonged in the plant figured by Gaudichaud, and, on the other hand, this foliage is imitated in some specimens from Mouna Kea, which have roundish calyx-lobes and no basal cusp to the anthers, therefore belonging to the var. *dentatum* of the preceding species.

Nuttall's genus *Metagonia* is equivalent to Klotzsch's sections *Macropelma*, *Disterigma*, *Neurodesia*, and a part of *Vitis-Idæa*, including a variety of species, which, however distributed, cannot be properly separated from *Vaccinium.* The dorsal awns are not always erect in the section *Macropelma;* in our specimens of *V. cereum*, from Tahiti, they are sometimes (perhaps abnormally) reflexed.

Our collection has nothing answering to the *Epigynium? Vitiense*, Seem., no. 284 of his Feejee collection.

GAULTHERIA (DIPLYCOSIA) LUZONICA (sp. nov.): foliis ovalibus utrinque acuminatis supra glabris subtus ramisque novellis parce strigoso-hispidis; pedunculis fasciculatis petiolo longioribus; bracteolis connatis orbiculatis. — Luzon, in the Majaijai Mountains; in fruit.

Epacrideæ.

The pollen in all the following species of *Cyathodes* is four-lobed, in the manner of *Ericaceæ*, to a suborder of which the *Epacrideæ* should be reduced.

CYATHODES POMARÆ (sp. nov.): fruticosa, erecta; foliis subpatulis oblongo-linearibus mucronatis margine integerrimis (novellis prope apicem ciliolatis) subtus glaucis multinervibus, nervis extimis subramosis; sepalis bracteolisque rotundatis subciliolatis; corollæ tubo calycem bis superante, lobis imberbibus; stylo subulato ovario 5–7-loculari triplo longiore. — Society Islands, on the mountains of Tahiti. Dr. Pickering in his notes does not distinguish this from the plant gathered on Eimeo, which is not well to be discriminated from the following species; while this has larger flowers as well as leaves, the tube of the corolla exserted beyond the calyx, and a longer style. Mr. Brown long ago alluded to a Tahitian *Cyathodes* (Prodr. p. 539), but it seems to have been unnoticed from the time of Cook's voyages down to our own Expedition. The two brought by our collectors appear not to be uncommon; so it is remarkable that nothing of the kind was collected by Bertero or Mœrenhout; at least none is mentioned in Guillemin's

Zephyritis Taitensis. The common Hawaian species having been dedicated to a celebrated king of those islands, this may bear the name of the gentler Tahitian queen, *Pomare.*

The various forms from the Sandwich Islands, including one of the Society Islands, appear to be reducible to two species: —

CYATHODES TAMEIAMEIÆ (Cham.): fruticosa; foliis patulis oblongis cuneato-obovatis linearibusve sæpius abrupte mucronatis margine ad apicem ciliolatis subtus glaucis multinervibus, nervis sæpius ramosis, floralibus parvis; sepalis bracteolisque orbiculatis ciliolatis; corollæ tubo calycem haud excedente, lobis aut barbatis aut imberbibus; stylo crasso ovario 5 – 8-loculari æquilongo.

Var. α. CHAMISSOI (*C. Tameiameiæ,* Cham., Hook. & Arn., DC.): corollæ lobis intus pl. m. barbatis. — Oahu, &c.

Var. β. BROWNII (*C. Banksii* (Gaud.?) & *Macræana,* DC.): corollæ lobis imberbibus. — Maui, Kauai, and especially Hawaii.

Var. γ. SOCIETATIS: corollæ lobis intus parcissime barbatis; foliis plerisque linearibus. — Eimeo, and probably Tahiti. — This is most probably the Tahitian plant mentioned by Brown; while to our var. β may belong both the Sandwich Island species to which he alludes.

CYATHODES DOUGLASII (sp. nov.): fruticosa; foliis suberectis oblongis seu lanceolatis acuminato-cuspidatis margine plerumque hispidulo-ciliolatis subtus pallidioribus vel glaucis 5 – 9-nervibus, nervis sæpissime simplicissimis; sepalis bracteolisque ovatis obtusis ciliatis; corollæ tubo calycem æquante, lobis intus barbatis; stylo subulato ovario 6-loculari bis terve longiore. — Hawaii, on Mouna Loa and Mouna Kea; also Maui, on Mouna Haleakala.

Var. β. STRUTHIOLOIDES: foliis erectis lanceolatis seu ovato-oblongis; sepalis acutis! Mouna Kea, high in the pastoral region; and perhaps a form on the mountains of Kauai, without flowers or fruit.

None of the various specimens here combined accord with the *C. Banksii* so imperfectly characterized by De Candolle. For, although the leaves are more or less erect, and rarely glaucous-white beneath, they are rough and ciliolate or serrulate on the margins, and with a pungent point; their nerves usually all simple. Also the larger flowers and longer style should distinguish all forms of this from the preceding species, unless that is even more polymorphous than I have supposed. As to the style in this and allied species, I should rely more upon it if I did not entertain some suspicion of diœcio-dimorphism in the genus.

The *Leucopogon* of the Feejee Islands, which Dr. Seemann has referred to *L. Cymbulæ*, Labill., of New Caledonia (in Bonplandia, 1861, p. 257, no. 285), I had characterized as *L. Vitiensis.*

Styracaceæ, incl. *Symplocineæ.*

There is no *Styrax* in the collection of the American Expedition. One would be much disposed to adopt the division, not, with Miers, into three genera, but into two, viz.: 1. *Styrax*, and 2. *Strigilia*, Cav., including *Cyrta*, Lour. Between the latter I can perceive no essential distinction. Bentham, however, appears to be justified in his conclusion, "that *Styrax* as a whole is far too natural to be thus broken up into distinct genera. The degree of adherence of the ovary and of the persistence of its dissepiments is variable in species otherwise closely allied," — and the same remark applies to the æstivation and texture of the corolla. It is remarkable that Miers should have referred that most true *Styrax*, *S. Japonica*, to his genus *Cyrta*, and have excluded from the latter *S. Benzoin.*

SYMPLOCOS SPICATA, Roxb. To this Indian, South Chinese, and Archipelagic species Dr. Seemann refers one which he, as well as our naturalists, collected plentifully in the Feejee Islands, — probably with good reason, although our specimens have for the most part the leaves entire or nearly so, and a shorter inflorescence. It runs into several varieties, one with very large leaves.

Ebenaceæ.

DIOSPYROS SAMÖENSIS (sp. nov.): ramis novellis vix puberulis; foliis glabris ovato-oblongis obtuse acuminatis basi acutis laxe venosis (3 – 6-poll.); pedunculis masculis 3 – 9-floris, fœmineis solitariis unifloris petiolum subæquantibus; calyce 4-fido sericeo-puberulo, lobis obtusissimis, fœmineis rotundatis basi intus quasi coronatis corollam extus sericeam 4-fidum adæquantibus; staminibus 8 – 9; ovario hirsuto 8-loculari; fructu globoso. — Tutuila and Savaii, Samoan or Navigators' Islands; "in woods, and also sometimes planted."

MABA FOLIOSA (Rich, in herb.): foliis confertis lato-ellipticis utrinque rotundatis basi cordatis brevissime petiolatis glabratis (pollicaribus vel sesquipollicaribus), novellis cum ramulis fructibusque olivæformibus ferrugineo-tomentulosis; pedunculis fructiferis brevibus 1 – 3-floris; calyce trilobo. — Muthuata and Ovolau, alt. 2,000 feet, Feejee Islands.

MABA ELLIPTICA, Forst., which apparently includes *M. major*, Forst., and which varies considerably in the shape of the leaves (in one form lanceolate-oblong and more or less acuminate), was gathered at the Tonga or Friendly, and the Samoan or Navigators' Islands, with the nascent leaves and shoots fulvous-hirsute, as described; while the Feejean collection has apparently the same species with the young parts glabrous. To this last may probably be referred all three *Mabæ* of Dr. Seemann's collection.

MABA SANDWICENSIS (A. DC.): foliis lato-lanceolatis oblongis seu ovalibus coriaceis pallidis venuloso-reticulatis glabratis, novellis cum ramulis floribusque sericeo-pilosis; floribus in axillis subsessilibus, masculis 15 – 17-andris calyce alte trifido, fœmineis ——; fructu ovali calyce breviter trilobo stipato. — Ludit foliis nunc utrinque acutiusculis vel obtusiusculis, nunc basi rotundatis, nunc utrinque rotundatis basi retusis, sesquipoll. ad 4-poll. — Oahu, Hawaii.

Sapotaceæ.

SERSALISIA GLABRA (sp. nov.): foliis obovato-oblongis basi attenuatis coriaceis glabris, venis reticulatis; pedicellis in axillis fasciculatis petiolo duplo longioribus; corolla calyce subsericeo paullo longiori campanulata 5-fida glabra, lobis rotundatis filamenta sterilia subulata multo superantibus stylo gracili æquilongis.—Woolongong, New South Wales. There is a specimen of this in the Hookerian herbarium from Mr. Backhouse; also a related one from Fraser, which is perhaps the *S. laurifolia* of Richard, and one from Cunningham, named *Mimusops myrsinoides*, may be the same thing.

ISONANDRA? RICHII (sp. nov.): undique glabra; foliis chartaceis obovatis apice rotundatis nunc retusis basi acutis; pedicellis calyce 4-fido plusduplo longioribus; filamentis barbatis. *Bassia retusa*, Rich, in herb. — Tongatabu. Only a single and not very perfect corolla is extant from which to determine the genus. As that appears to be four-cleft, like the calyx, and with a fertile stamen in the sinuses, as well as one before each lobe, and there are no appendages, I refer the plant to *Isonandra*, notwithstanding the bearded filaments.

BASSIA AMICORUM (sp. nov.): foliis obovatis seu ovalibus retusis glabris viridibus (3 – 6-poll.); pedicellis elongatis; corolla glabra 6-partita (semipollicari) calyce 6-nervi plusduplo longiore; staminibus 18; filamentis subulato-filiformibus antheris lineari-sagittatis cuspidatis æquilongis. — Tongatabu, on the shore. Mr. Rich supposed this to be Forster's *B. obovata*, from Tanna; but that has the leaves less veiny, more tapering at the base, and somewhat pointed at the apex, shorter pedicels, much smaller flowers, and the corolla (probably more than six-cleft) pubescent externally.

SAPOTA? PYRULIFERA (sp. nov.): glabra; foliis oblongo-lanceolatis utrinque subacuminatis pallidis subcoriaceis tenuiter transversim venosis (3 – 5-poll. longis); calyce 5-partito; fructu pyriformi parvo (semipollicari) pedunculo paullo longiori semine unico obovato turgido repleto. — Ovolau, Feejee Islands. Flowers unknown.

SAPOTA? VITIENSIS (sp. nov.): glabra; foliis oblongis seu obovato-oblongis obtusis vel retusis subcoriaceis reticulatis (4 – 6-poll. longis) basi in petiolum longiusculum attenuatis; fructu subsessili globoso 3 – 4-sperma (pollicem diametro). — Ovolau, Feejee Islands, on the coast.

A third Feejean species was gathered on Vanna-levu, the materials wholly insufficient for determination.

SAPOTA SANDWICENSIS (sp. nov.): foliis elliptico-oblongis basi acutis tenuiter transversim venosis et reticulatis mox glabris, novellis ramulisque pube tenui rufa seu albida tomentulosis, petiolo gracili pedicellis longiore; floribus pentameris; corolla glabra calycem vix superante, lobis ovatis acutiusculis; staminibus sterilibus spathulato-lanceolatis cum 5 fertilibus subinclusis; ovario 5-loculari. — Var. *α*. foliis obtusissimis 3 – 6-pollicaribus, petiolo sæpe sesquipollicari. *β*. foliis 1½ – 3-pollicaribus sæpe acutiusculis. — Sandwich Islands: mountains of Oahu, where it was also collected by Remy (no. 478) in fruit. *β*. Hawaii and Lanai, Remy (no. 475, 476). A genuine *Sapota*, of De Candolle's second section. Fruit like a small apple. Seeds albuminous. Ovules ascending.*

Primulaceæ.

LYSIMACHIA HILLEBRANDI, Hook. f. (sp. nov.): fruticosa, glabrata, ramosa; ramis undique foliosis; foliis alternis nunc verticillatis ellipticis oblongis lanceolatisve sæpius acutatis vel acuminatis subcoriaceis laxe reticulato-venosis; pedunculis ex axillis superioribus nutantibus unifloris ferrugineo-pubescentibus; floribus 5 – 8-meris; corollæ subrotatæ lobis late obovatis sepala ovato-lanceolata acuminata fere duplo excedentibus; filamentis basi monadelphis styloque gracilibus. — Sandwich Islands.

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* The doubtful plant from Kauai mentioned in Dr. Pickering's printed Notes (p. 403), in connection with the above "Chrysophylloid" tree, proves to be a *Xylosma* (in fruit only), and one which was likewise gathered by Remy (no. 536) in Hawaii, but with less rigid and coriaceous leaves. I think it is not distinct from *X. orbiculatum*, Forst., which, along with *X. Lepinei*, and perhaps *X. goniocarpum* and *X. integrifolium*, of Clos's monograph, may be safely combined with *X. suaveolens*, Forst. The leaves of the original species are similarly reticulated, but the finer meshes are not sufficiently exhibited in Plate 4 of the Botany of the Exploring Expedition.

Var. *α.* foliis ellipticis seu elliptico-lanceolatis basi in petiolum angustatis. *L. Hillebrandi*, Hook. f. in litt. — Oahu and Maui.

Var. *β.* DAPHNOIDES: foliis oblongis arcte sessilibus et crebris. — Kauai.

Var. *γ.* ANGUSTIFOLIA: foliis lineari-lanceolatis creberrimis. — Maui, coll. Remy.

A truly shrubby *Primulacea*, attaining several feet in height, but a genuine *Lysimachia.*

There are specimens in our collection from the Sandwich Islands, and much better ones in Remy's, apparently referable to *Lysimachia leariloba*, Hook. & Arn., from the Loo Choo Islands. At least, no notable difference appears between them and fine specimens gathered by Mr. Wright, both in the Loo Choo Islands and in Japan, — the more luxuriant forms of which accord with *L. lubinioides*, Sieb. & Zucc. But Zuccarini's *L. leariloba* from Bonin must be different, being said to have lanceolate acute sepals, and pedicels scarcely two lines long. His description of *L. lubinioides* applies to our plant, except that the style is not short, nor are the filaments, even in his own plant, monadelphous at the base. The divisions of the corolla are spatulate, not linear, so that the specific name is deceptive, the stem is herbaceous, and the thickish leaves by no means "*impunctate*."

Myrsinaceæ.

MÆSA PICKERINGII (sp. nov.): foliis lato-lanceolatis oblongisve subintegerrimis mox glabris, nascentibus ramulisque pilosulis; racemis axillaribus simplicibus rariusve compositis gracilibus; calyce cum bracteis ovato-subulatis hirsuto, lobis ovatis acutis corollæ tubum subæquantibus; drupis ovoideis. — Viti-levu, one of the Feejee Islands. — Differs from *M. nemoralis* (which we have from the Samoan and Friendly Islands) in the hairy pubescence of the inflorescence, especially of the calyx, narrower leaves, smaller flowers, and narrower and acute bracts and bractlets. The latter is completely glabrous, with the bracts, bractlets, and calyx-lobes (especially the latter) broadly ovate and obtuse. To *M. nemoralis* probably belongs a portion of no. 286 of Dr. Seemann's collection. The remainder, with ferrugineous-puberulent inflorescence, is something different, but hardly *M. Indica.*

MÆSA PERSICÆFOLIA (sp. nov.): glabra; foliis lato-lanceolatis integerrimis, venis transversis; paniculis axillaribus folio sub-brevioribus; floribus parvis; bracteis bracteolis calycisque lobis ovato-acutis; corollæ tubo campanulato calyce paullo longiori; drupis ovoideo-globosis brevissime pedicellatis. — Mbua or Sandalwood Bay, &c., Feejee Islands. No. 287 of Dr. Seemann's collection, in his list referred to "*M. Indica*, var." is perhaps a form of this species; but the pedicels are longer, the leaves broader, of thicker texture, and the primary veins much more ascending.

MÆSA CORYLIFOLIA (sp. nov.): foliis ovatis cordatis repando-dentatis cum ramis paniculisque (terminalibus et axillaribus folium adæquantibus) dense mollissime pubescentibus superne mox glabratis; pedicellis flore haud longioribus; bracteis bracteolisque ovato-subulatis parvis; calycis lobis triangulari-ovatis villosis tubum corollæ brevi-campanulatæ fere æquantibus; drupis ovoideis puberis. — Mountains of Muthuata, Feejee Islands. "*M. macrophylla*, Wall.?" no. 288 of Seemann's list, is this species in fruit. The specimens of our Expedition are in flower only.

MYRSINE MYRICÆFOLIA (sp. nov.): glaberrima; foliis subspathulatis seu oblongis basi cuneatis in petiolum attenuatis integerrimis apice sæpius retusis utrinque crebre punctulatis, venis vix perspicuis; floribus tetrameris sessilibus; calycis lobis lato-ovatis obtusissimis; corolla quadripartita; drupis globosis. Muthuata, Feejee Islands. Eimeo, Society Islands. Drupe closely sessile or nearly so, — by which this species may be distinguished from any form of *M. capitellata* (including *neriifolia*, *Korthalsii*, &c.); but the discrimination of some forms of this from *M. crassifolia* may be more difficult. The fruiting specimens of Seemann's no. 289 are ambiguous between these two; the female flowering ones, and also no. 290 (foliage only) belong to *M. myricæfolia.*

MYRSINE? BRACKENRIDGEI (sp. nov.): glabra; foliis membranaceis oblongis utrinque acutis vel acuminatis petiolatis margine integerrimis vel undulatis; pedicellis filiformibus fructu globoso 3 – 5-plo longioribus; calyce 5-lobo, lobis rotundis ciliatis. — Mountains of Ovolau, Feejee Islands. In fruit only; probably of this genus.

MYRSINE TAITENSIS (sp. nov.): glaberrima; foliis crasso-coriaceis oblongo-ellipticis seu ovalibus integerrimis utrinque obtusis brevissime petiolatis supra nitidis crebre costato-venosis, venis venulisque reticulatis prominulis; pedicellis fructu longioribus; calycis fructiferi lobis 4 triangulari-ovatis acutiusculis. — Mountains of Tahiti, Society Islands. Flowers not seen.

From the Sandwich Islands I have seen nothing answering to *Myrsine Gaudichaudii*, A. DC., with subsessile fruits and triangular acute calyx-lobes, but the collection comprises various forms of *M. Sandwicensis* and *M. Lessertiana*, the latter mostly with obovate- or cuneate-oblong and obtuse, or even retuse, leaves, the largest 5 or 6 inches in length. Their scanty flowers enable me to ascertain that the petals are distinct to the base and valvate in æstivation. De Candolle's tribe *Embelieæ* manifestly should be suppressed, and his two suborders certainly do not merit such a rank.

ARDISIA? CAPITATA (sp. nov.): arborea? glabra; foliis ad apicem ramorum crassorum congestis obovato-spathulatis ultrapedalibus subcoriaceis integerrimis reticulato-venulosis basi in petiolum brevem crassum angustatis; pedunculis axillaribus compressis simplicissimis capitulum strobilaceum gerentibus; bracteis magnis squamaceis persistentibus. — Ovalau, Feejee Islands. — *A. grandis*, Seemann, no. 293 (in fruit only), considerably resembles this in foliage, but has thyrsoid panicles.

Oleaceæ.

OLEA SANDWICENSIS (sp. nov.): lævis; foliis lato-lanceolatis oblongisve acuminatis integerrimis petiolatis supra lucidis subtus pallidis; racemis axillaribus brevibus; corolla profunde quadripartita; staminibus (an semper?) 4; ovario conico; drupa ovoidea (in stirp. angustifol. oblonga). — Oahu, Sandwich Islands; also in Remy's collection from Kauai (no. 479), and a narrow-leaved form, with the immature fruit similar to a common olive, from Molokai (no. 482). Leaves resembling those of *Laurus nobilis*. The four stamens, although unusual in the family, are not unprecedented, being occasionally met with in *Chionanthus*.

Blume, followed by Endlicher and De Candolle, attributes to *Chionanthus* and *Linociera* an exalbuminous seed and a thick embryo; and De Candolle founds a tribe thereupon. But this is not the case in the original species, — *C. Virginica*, as I had long ago noted, and *C.* (*Linociera*) *ligustrina*, as Charles Wright had observed upon the living plant in Cuba, and I have verified in the dried specimens, having the albumen and flat cotyledons of *Olea*. I have no ripe fruit of the Asiatic species, but Dr. Hooker informs me that they are truly exalbuminous in *C. montana, purpurea, &c.*, and also in the West Indian *C. compacta;* — from which it would appear that this character is here not even of generic importance.

C. Virginica is occasionally three-seeded.

Jasminaceæ.

JASMINUM TETRAQUETRUM (sp. nov.): erectum, glabrum; foliis oppositis unifoliolatis, articulo petioli obscuro, foliolo ovato-lanceolato seu ovato acuminato basi acutiuscula trinervi; pedunculis brevibus paucifloris; calyce fructifero tetraptero, alis angustis deorsum in pedicellum longe clavatum decurrentibus sursum in dentes lineari-subulatos verticales tubum 2–3-plo superantes productis. — Feejee Islands, on the mountain summit back of Muthuata. In fruit.

J. simplicifolium, Forst. (*J. australe*, Pers., and by some clerical mistake "*J. gracile*, Forst.," in Dr. Seemann's list) was collected on the Feejee and other islands; and *J. didymum*, Forst. (= *J. divaricatum*, R. Br. and *J. parviflorum*, Decaisne) on the Tonga and Samoan, as well as the Society Islands.

Apocynaceæ.

ALYXIA BRACTEOLOSA (Rich, in herb. Ex. Exped.): subscandens, glaberrima; foliis plerumque ternis oblongis vel sublanceolatis nunc obtusis nunc acumine obtuso apiculatis caudatisve basi acutis vel rotundatis supra nitidis transversim lineatis sublonge petiolatis; cymis axillaribus plurifloris brevissime pedunculatis petiolum vix superantibus; pedicellis brevibus arcte imbricato-bracteolatis; bracteolis ovato-triangularibus dorso carinatis intus concavis ciliolatis sepalis consimilibus; corolla lutea longius tubulosa; stigmate imberbi; ovariis glaberrimis, drupis subglobosis breviter stipitatis. — Navigators', Tonga, and Feejee Islands.

Var. *β*. MACROCARPA: fructu olivæformi maximo (sesquipollicari) e drupellis 2–3 conflatis. *A. macrocarpa*, Rich, in herb. Feejee Islands.

Var. *γ*. ANGUSTIFOLIA: alte scandens; foliis minoribus angustioribus etiam sublinearibus. *A. stellata*, Seem. in Bonpl. 1861, p. 257, no. 310. Tonga and Feejee Islands.

Var. γ. PARVIFOLIA: foliis minoribus ellipticis (1½–2-poll.); pedunculis paucifloris nunc elongatis, fructiferis petiolo bis longioribus. Feejee Islands.

The other species of the collection are *A. stellata*, from the same groups of islands, and from Tahiti and Eimeo; *A. scandens*, only from the latter; and the Sandwichian *A. olivæformis*, Gaud., to which must be referred *A. sulcata*, Hook. & Arn., and may be referred a small-leaved variety, *myrtillifolia*.

CERBERA ODOLLAM, Gærtn., from Tahiti, &c. (where it is not indigenous), must be Forster's and Guillemin's *C. Manghas*.

CERBERA LACTARIA, Hamilton (*C. Odollam* of Dr. Seemann's collection) comes from Tongatabu and the Feejee Islands. So also does

OCHROSIA PARVIFLORA, Hensl. (*Cerbera*, Forst.): it is named *O. elliptica* by Seemann, and perhaps it is Labillardiere's plant. To the lamented Prof. Henslow's account may be added, that the ovaries are not really united except at their apices, that the ovules are eight, four on each margin of the suture, amphitropous, the micropyle superior.

OCHROSIA SANDWICENSIS, A. DC. is not in the collection of the Expedition, but is in Remy's collection; the flower-buds almost an inch long, the narrow lobes of the corolla rather longer than the tube, which is glabrous within. Ovules 3 or 4 in each ovary. Seeds peltate on each face of the nearly complete false partition, exalbuminous? Radicle inferior!

LYONSIA LÆVIS (sp. nov.): glabra; foliis ovatis subcordatis acutato-acuminatis; calycis lobis triangularibus acutis brevibus; corolla fere glabra fauce tantum annulatim barbata; squamis nectarii discretis glaberrimis ovarium subæquantibus; capsula cylindrica leviter bisulcata. — Feejee Islands. This is probably the *Echites scabra?* of Dr. Seemann's collection, no. 315, of which I have seen no specimen; but it differs from the New Caledonian plant (judging from Labillardiere's figure) in the pointed leaves, the general smoothness, smaller and acute calyx-lobes, glabrous nectary and ovary, terete capsule, and nearly glabrous corolla, within having a bearded ring instead of five vertical bearded lines. Of his *Lyonsia*, Brown well remarked that it is *Parsonsiæ nimis affinis*. The best distinction is to be found in the thickish lobes of the corolla, essentially or nearly valvate in æstivation; so that here, rather than in *Parsonsia*, belongs *P. ventricosa* of F. Müller.

ALSTONIA, R. Br., subgen. DISSURASPERMUM. Semina undique æqualiter et creberrime ciliato-plumosa, haud vero comosa, basi apiceque in acumen vel caudam producta, cauda superiori apice bifida: albumen tenuissimum. Corollæ lobi lineari-lanceolati, æstivatione sinistrorsum (sensu Candollii) convoluti: faux barbata. — Frutices vel arbusculæ insularum, foliis oppositis, petiolis angustissime marginatis basi pl. m. dilatatis, cymis patentibus.

A. (DISSURASPERMUM) COSTATA, R. Br. (*Echites*, Forst.) Society Islands. Brown's doubt whether the cilia which fringe the seeds were elongated at the base and apex into a coma, evinced his usual caution. In fact, the seeds are not properly comose at all, but equably ciliate-fringed all round, the tails short, flat, and equally fringed with the rest of the margin, the lower one entire and rather blunt, the upper notched or bifid. The rudiments of one or both of these tails are to be seen in *A. ophioxyloides*, F. Müll., in which the hairs extend both ways into a coma. Forster's description of the seeds "*margine cylindrica*" is, I presume, a lapsus for "*margine ciliata.*"

A. (DISSURASPERMUM) PLUMOSA, Labill., to which must belong our specimens from the Samoan and Feejee Islands, is more closely related to the foregoing than would be inferred from Labillardiere's plate, as that does not well represent the stigma (indusiate-appendaged below, and with sharper lobes above), nor the calyx, which is five-parted to the base. But the seeds are not badly figured, except that the long tails are flat in our specimens, rather than exactly filiform. These two species might be wholly detached from *Alstonia* with better reason than *Blaberopus* has been.

Asclepiadaceæ.

TYLOPHORA SAMÖENSIS (sp. nov.): herbacea, volubilis, fere glabra; foliis cordatis acuminatis membranaceis; pedunculis filiformibus petiolo apice glandulifero longioribus; umbellis plurifloris; corollis virescentibus; coronæ stamineæ foliolis subcarnosis lineari-oblongis apice acutiusculo antheras adæquante tantum a gynostegio liberis; polliniis obovato-oblongis adscendentibus brevissime stipitatis. — Savaii, one of the Samoan Islands. Follicles 6 inches long, slender, smooth.

TYLOPHOLA BRACKENRIDGEI (sp. nov.): volubilis, glabrum; foliis ovatis subcordatis mucronatis; pedunculis petiolum apice haud glanduliferum subæquantibus; umbellulis plurifloris; floribus carneis undique glabris; corona staminea e glandulis seu gibberibus carnosis lateraliter compressis usque ad apicem acutum adnatis (in sicco subulatis) anthera brevioribus; polliniis ovalibus juxta medium stipiti brevi flexuoso affixis adscendentibus. — Ovolau, Feejee Islands. Stigma depressed. Immature follicles smooth, short, acuminate-rostrate. Probably this is a congener of Endlicher's *Hybanthera biglandulosa*, the pollen-masses of which are probably not so pendulous as is represented. The structure of the androecium is very similar, but the coronal appendages are transversely dilated at the base, thence gradually tapering to an acute summit, the whole perfectly adnate to the back of the anther. In Dr. Wight's *Iphisia* (*T. Iphisia* and *T. Govanii*, Decaisne) I find the same structure, the fleshy appendages equally adnate and laterally compressed.

GYMNEMA SUBUNDUM (sp. nov.): volubile, undique glabellum; foliis membranaceis ovato-lanceolatis seu ovato-oblongis basi rotundatis vel subcordatis; pedunculis petiolum adæquantibus; umbella sæpius bifida; corolla rotata 5-partita imberbi squamulis fere obsoletis sinubus instructa; gynostegio brevissimo. — Mountains of Muthuata, Feejee Islands. — To *Gymnema* both *Gongronema* and *Bidaria* must doubtless be restored. The æstivation of the corolla, said by Blume to be valvate, is convolute, as described by Decaisne, in all the species I have examined, but in most of them the margins so slightly overlap that the æstivation might readily be taken for valvate.

GYMNEMA STENOPHYLLUM (sp. nov.): fruticosum, erectum (3–6-ped.), ramosissimum, fere glabrum; foliis coriaceis linearibus basi attenuatis marginibus revolutis, costa subtus pilosula; pedunculis axillaribus brevissimis; corolla rotata alte 5-fida inappendiculata, lobis extus glabris intus tenuiter barbatis; gynostegio brevissimo; polliniarum stipitibus gracilibus spiraliter contortis. — Feejee Islands, on the barren upland of Muthuata. This has recently been collected by Dr. Seemann (no. 322), who has obtained it with young follicles. These are slender, almost as much so as the leaves, and smooth. The pollinia accord with the character of *Sarcolobus*, R. Br., but they are not "apice lateraliter pellucidæ," as Miquel has it. Dr. Seemann takes this for a new genus, and indeed, as the genera are arranged by Decaisne, it does not accord throughout with either *Bidaria*, *Gongronema*, or *Gymnema* proper, while the erect habit is also peculiar. But if the two former genera be restored to *Gymnema*, the present plant could not well be excluded.

HOYA BICARINATA (sp. nov.): scandens; foliis glabellis subcarnosis planis obscure penninerviis ovalibus seu ovatis brevissime abrupteque acuminatis basi rotundatis subcordatisve, lamina supra petiolum hirtellum glandulosa; pedunculo pedicellis haud longiori; sepalis lineari-oblongis; corollæ albæ extus glabræ intus puberulæ lobis ovatis acutis planis; coronæ stamineæ foliolis incrassatis, disco obovato concavo angulo interno longiuscule acuminato, marginibus haud revolutis, dorso eximie bicarinato. — Samoan, Tonga, and Feejee Islands. This may be Forster's *Asclepias volubilis* (non Linn.), from Tanna. It is the *Hoya Billardieri*, no. 319, of Dr. Seemann's list; but hardly that of Decaisne. For the pieces of the stamineal crown are strikingly acuminate, instead of "angulo interiore obtuso."

HOYA DIPTERA, Seemann, no. 320, we have also from the Feejee Islands, along with other indeterminable specimens equally without flowers or fruit.

Convolvulaceæ.

JACQUEMONTIA SANDWICENSIS (*Convolvulus ovalifolius*, Hook. & Arn., non Vahl. *Ipomœa ovalifolia*, Chois. pro parte): villoso-pubescens, nunc glabrata; caulibus e radice tuberosa procumbentibus; foliis carnosulis obovatis cuneato-oblongisve emarginatis vel obcordatis breviter petiolatis; pedunculis folium æquantibus 1 – 3-floris; sepalis 3 exterioribus ovatis obtusis herbaceis, 2 interioribus multo minoribus oblongo-lanceolatis acuminatis; corolla calyce duplo longiore. — Sandwich Islands; common. Root, according to Dr. Pickering, tuberous and edible. Stigmas elongated-oblong, flattish.

BONAMIA MENZIESII (sp. nov.): caule lignoso decumbente; ramis volubilibus, junioribus herbaceis cum foliis ellipticis utrinque obtusis vel retusis (supra mox glabratis) aurato-tomentulosis; pedunculis axillaribus unifloris recurvis, fructiferis deflexis; sepalis rotundatis coriaceis sericeis; stylis 2 basi connatis; capsula ovoidea coriacea evalvi; seminibus baccatis. — Sandwich Islands, where it was discovered by Menzies.

Var. β. foliis oblongis seu ovato-lanceolatis acutis vel acuminulatis. *Convolvulus ovalifolius*, var.? Hook. & Arn. — Maui, Remy, no. 420.

We have abundant ripe fruit and a few flower-buds. Remy's no. 420 had dropped the corollas, but exhibited the styles. Corolla silky externally. Ovary 2-celled, each cell biovulate. Stigmas capitate. Seeds 4 or only 2, with a baccate-fleshy purple or crimson episperm, covering a hard seed-coat. If Brown has rightly stated the difference between *Bonamia* of Thouars and his *Breweria*, the two genera cannot be maintained, and the older genus of Thouars must also include *Stylisma*, Raf. Traces of the fleshy episperm are perceptible in *B. Roxburghii* and in our *B.* (*Stylisma*) *humistrata.*

Hydrophyllaceæ.

The study of a *Nama* from the Sandwich Islands led to the examination of all the species known to me, with the following result: —

NAMA, *Linn.*

§ 1. Folia in caulem alato-decurrentia, obovata vel spathulata, pube molli villosa seu pilosa: rami procumbentes.

1. N. Jamaicensis, Linn.: pube brevi; foliis late obovatis spathulatis; pedunculis brevissimis vel calyce brevioribus; capsula oblonga demum patente vel reflexa. — Key West, *Blodgett.* Mexico and Texas, *Berlandier* coll. no. 2049, 2062, 2298; Drummond, coll. 2, 316; *Lindheimer*, no. 476, 642 (the latter with very large leaves); *Wright*, *Gregg*, *Ervendberg*, no. 189.

2. N. biflora, Chois.: villosa; foliis spathulato-oblongis; pedunculis plerisque in pedicellos filiformes (fructif. semipollicares et ultra) bifurcatis; capsula brevi. — Mexico, between Victoria and Tula, *Berlandier*, no. 2200, not 220 as recorded in DC. Prodr.

§ 2. Folia in caulem haud decurrentia, sæpius cinerea, nec incana:

* Omnia in petiolum sat manifestum attenuata: radix dura, "lignosa," perennis?

3. N. origanifolia, H. B. K.: molliter cinereo-pubescens, cæspitoso-diffusa; foliis parvis (adjecto petiolo 3 – 6 lin. longis) obovatis seu spathulato-oblongis, venis subtus prominulis; floribus sæpius geminis; pedunculis calyce brevioribus; capsula ovali-oblonga. — *N. origanifolia* & *N. rupicola*, Chois. Hydrol. & in DC. l. c. *N. subincana*, Willd. in Rœm. & Schult. l. c. — *N. dichotoma*, var. *parvifolia*, Torr. Bot. Mex. Bound. p. 147. — This occurs in Berlandier's collection as no. 2254, collected "between Santander and Victoria," Mexico, upon which specimens I suppose that Choisy's *N. rupicola* is partly founded. The *N. origanifolia* figured and described by Kunth is, I presume, of the same species. But the plant, as I suspect from the inspection of Berlandier's specimens, is not truly fruticulose, but is

rather an annual, with the base indurated, as is common in these dry regions late in the season. Dr. Torrey's fine specimens, from Santa Rosa, Chihuahua, Dr. Bigelow, and Monterey, Edwards and Eaton, accord with Berlandier's.

** Folia sessilia vel basi attenuata vix petiolata (radix annua) :

+ Pube molli sæpius pl. m. viscosa cinerea vel hirsutula: sepala (modo generis) sursum dilatata.

4. N. UNDULATA, H. B. K. Pube molli et hirsutula cinerea; foliis margine sæpe undulatis, superioribus oblongis basi lata arcte sessilibus, inferioribus oblanceolatis deorsum longe attenuatis; floribus breviter pedunculatis vel subsessilibus plerisque lateralibus; capsula elongato- seu lineari-oblonga. Var. β. (*Macrantha*, Chois. Hydrol. t. 2, f. 1): foliis caulinis basi vix attenuatis; pedunculis nunc brevibus nunc gracilioribus calyce æquilongis. — Mexico and S. Texas. To this I refer Berlandier's no. 2116 (the var. β.), 1095, 1435, 2111, 2120, 2195, 2215, 2328, 2525, and some specimens collected by Dr. Gregg. A fragment from California, collected by Mr. Wallace, seems also to be of this species. So is a plant collected at Fort Yuma by Major Thomas, in herb. Torr.

5. NAMA DICHOTOMA (Chois.): viscoso-pubescens; foliis spathulato-oblongis oblanceolatisve basi attenuatis subsessilibus; floribus plerisque in dichotomiis sessilibus vel pedunculis calyce dimidio brevioribus; capsula ovato- seu breviuscule oblonga. *Hydrolea dichotoma*, Ruiz & Pav. Fl. Per. 3. p. 22, t. 244. — Taking Spruce's no. 5802, from the Equatorian Andes, to represent Ruiz and Pavon's plant, with the alar flowers sessile and the corolla not exceeding the calyx, I refer to it Coulter's no. 916 from Mexico, and his no. 463 from California; in both of which the flowers in the forks are sometimes nearly sessile, and sometimes short-peduncled, or short-peduncled lateral flowers come from the reduction of one fork to a short peduncle; and the corollas are twice as long as the calyx. But all the species appear to vary in this respect.

6. N. SANDWICENSIS (sp. nov.): pube brevi hirsutula cinerea; foliis spathulatis deorsum attenuatis; pedunculis terminalibus demumque lateralibus sæpius bifurcatis calyce fructifero longioribus; capsula ovali. — Sandwich Islands: Oahu, Macrae, Nuttall, Remy, no. 425. Sand-hills of Maui, Dr. Pickering and Mr. Breckenridge. Kauai, Nuttall. Very much branched; the leaves soon revolute, 4 – 6

lines long. Flowers small. Flower-stalks in fruit from 3 to 6 lines in length, divergent.

+ + Hispida: sepala sursum vix ampliata.

7. N. HISPIDA: setis albis rigidis undique hispida; foliis oblongo-linearibus seu spathulatis; floribus terminalibus demum lateralibus subsessilibus sæpe geminis vel subscorpioideo-seriatis; sepalis angustissime linearibus; capsula oblonga. *N. Jamaicensis?* Engelm. & Gray, Pl. Lindh. 1. no. 130, non Linn. *N. dichotoma*, Torr. Bot. Mex. Bound. Surv. p. 147, excl. var. *N. biflora*, var. *spathulata*, Torr. in Pacif. R. R. Surv. 5. p. 362. Texas and the Mexican borders of the Rio Grande; Coll. Berlandier, no. 2385, 2443, 2486, and perhaps 1420; Drummond, III. no. 195; II. 309; Lindheimer, no. 130, and in later collections; W. Texas and New Mexico, Wright, no. 493, 494, 495, 1585, 1586; Fendler, no. 643. Less hispid forms probably referable to this species are from New Mexico or Arizona, no. 1584, Wright; from the mountains of San Antonita, New Mexico, Dr. Bigelow, and the same from Fort Yuma, California, Major Thomas, and from the same district by Fremont; also Arizona, Thurber.

§ 3. Folia haud decurrentia, abrupte longius petiolata, subtus pube sericeo-villosa argenteo-incana; pedunculi cymoso-pluriflori, floribus pedicellatis pro genere maximis, corolla ¾-pollicari.

8. N. SERICEA, Willd.; Rœm. & Schult. Syst. 6. p. 189. *N. longiflora*, Chois. Hydrol. p. 20, t. 2, f. 2, & in DC. Prodr. Mexico: Coll. Coulter, no. 914, 915.

⁂ Species dubia.

N. HIRSUTA, Martens & Galeotti, ex Walp. Repert. 6. p. 565. Oaxaca, Mexico.

Borraginaceæ.

HELIOTROPIUM ANOMALUM (Hook. & Arn.): fruticosum, depressum, strigoso-incanum; foliis confertis lineari-lanceolatis basi attenuatis spathulatis; cymis pedunculatis glomerulifloris; calycis lobis inæqualibus imbricatis 2 exterioribus ovatis seu oblongis, cæteris linearibus; corollæ tubo extus strigoso-sericeo calyce bis longiore; antheris apicibus brevissime barbulatis primum cohærentibus, nuculis 4 rarius 5–6 scabris. *Lithospermum incanum*, Forst. *Pentacarya heliotropioides*, DC. — Coral Islands, and Sandwich Islands.

Var. β. ARGENTEUM: pube molliore densiore nitente incanum; floribus paullo majoribus. — Sandwich Islands.

The anomaly of five nucules to the fruit, which suggested Hooker's specific as well as De Candolle's generic name, is so far from constant, that I could not detect a single instance in a long suite of specimens, although Dr. Pickering appears from his notes to have been more lucky. I have found six nucules; but a supernumerary carpel is not so extraordinary; and this suggests that the five nucules, when this number occurs, result from the abortion of one cell or half-carpel. In all essential respects this species is a Heliotrope, in which genus even the inequality of the sepals is not altogether unexampled.

Without hesitation, we may reduce to the genus *Heliotropium* Nuttall's *Euploca* (as I had already indicated), Endlicher's *Schleidenia* (*Preslea*, Mart.), and De Candolle's *Pentacarya*, and (with Fresenius) associate *Tournefortia* with it rather than with *Ehretia*. But the plant which (in Mem. Amer. Acad. n. ser. 6. p. 403) I had inadvertently referred to *Heliotropium*, viz. *H. Japonicum*, is only a variety (with broader leaves and longer style) of Ammam's *Arguzia* (*Tournefortia Arguzia*, DC.), a connecting link between *Heliotropium* § *Heliophytum* and *Tournefortia*.

Considerations analogous to those which forbid the dismemberment of *Heliotropium*, point, though perhaps less directly, to the reunion under *Coldenia* of several plants which have been distinguished as genera.*

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* If we retain under *Coldenia* both *Stegnocarpus*, DC. and *Tiquilia*, Pers. (which is *Galapagoa*, Hook. f.), and add *Eddya*, Torr. (and even *Ptilocalyx*, Torr.), a well-marked genus, of uniform floral characters and not incongruous in habit, will be the result. Otherwise we shall have four or five genera for barely twice as many species. The genus may be thus disposed in sections: —

COLDENIA, Linn.

I. Fructus e nuculis 4 trigonis dorso convexis intus faciebus planis arcte conjunctis, crassis, crustaceis.

1. EUCOLDENIA, DC. Styli 2, breves. Fructus globoso-quadrilobus: nuculæ geminatim subconnatæ, demum partibiles. C. PROCUMBENS, Linn.
2. STEGNOCARPUS, DC., Torr. Stylus bifidus. Fructus globosus in nuculas 4 secedens. C. CANESCENS, DC. *Stegnocarpus canescens*, Torr. in Pacif. R. R. Rep. 2, p. 169, t. 7.

II. Fructus alte quadrilobus, e nuculis 4 (vel abortu paucioribus) ovatis parvis angulo interno basi styli mediante tantum connexis, pericarpio tenui.

3. EDDYA, Torr. Stylus superne bifidus. Nuculæ tenuiter crustaceæ, papilloso-scabræ. C. HISPIDISSIMA, Torr. l. c., t. 9.

CORDIA ASPERA (Forst.): pube ferruginea hirsuta, demum glabrescens; foliis membranaceis ovatis acuminatis asperulis supra glabratis, serraturis subulatis; floribus parvis cymoso-glomeratis; calyce ovato-cylindraceo ferrugineo-villoso 10-striato, dentibus 5 minimis subulatis; corollæ tubo calycem vix superante lobis æstivatione inflexis et corrugatis longiore; drupa ovata acuta nuda, putamine 1 – 2-spermo. — Tonga, Feejee, Samoan, and some of the Coral Islands. A distinct and genuine *Cordia*, but the specific name is unfortunate, for the leaves are by no means rough. — This is no. 336 of the Feejee collection of Dr. Seemann, referred by him to *C. Sprengelii*, DC., but it does not accord with Sprengel's detailed description.

Labiatæ.

GARDOQUIA PILOSA (sp. nov.): fruticosa; foliis lato- seu rhombeo-ovatis petiolatis subserratis lineato-venosis haud coriaceis puberulis subtus vix canescentibus; verticillastris multifloris; calycis hirsuti pedicello longioris dentibus subulatis, fauce intus nuda; corollis "coccineis" pilosis calyce (semipollicari) triplo longioribus. — Andes of Peru at Baños. Resembles *G. rugosa* in the foliage, but the flowers are much larger, the corolla elongated, &c. It needs to be compared with *G. pulchella*, H. B. K.; but the branches are glabrous, and the leaves not tomentose beneath, nor coriaceous.

SPHACELE HASTATA (sp. nov.): herbacea; foliis amplis hastatis creberrime crenulatis utrinque cauleque cano-tomentulosis, floralibus oblongo-lanceolatis sessilibus; cymis laxis multifloris thyrsum elongatum efficientibus; corollis "purpureis" tubulosis calyce triplo longiori-

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4. TIQUILIA, Pers. Stylus bifidus vel divisus. Nuculæ læves, nitidæ, tenuissime crustaceæ. Embryo generis, i. e. cotyledones planæ, integræ. C. DICHOTOMA, Lehm. C. (*Galapagoa*, Hook. f.) DARWINI & FUSCA.
5. TIQUILIOPSIS. Corollæ tubus basi intus 5-squamatus. Nuculæ fere membranaceæ. Cotyledones bipartitæ, radiculæ utrinque accumbentes. Cæt. *Tiquiliæ.* C. NUTTALLII, Hook. Kew Jour. Bot. 3, p. 296. *Tiquilia parvifolia*, Nutt. in herb. Hook. *T. brevifolia,* Nutt. herb. ex Torr. Bot. Mex. Bound., p. 136. *T. Oregona,* Torr. Bot. S. Pacif. Exped. (Calif. & Oregon), t. 12.

PTILOCALYX, Torr. in Pacif. R. R. Rep. l. c., t. 8, where it is admirably figured, may be regarded as a *Stegnocarpus*, with all but one of the cells of the ovary sterile, these appearing as lateral vestiges on the cross-section of the monococcous coriaceous fruit. In this view it is not likely to stand as a genus, unless *Tiquilia* also does. Those who regard the reduction here foreshadowed as too great, might be better satisfied with three genera, viz. *Coldenia, Ptilocalyx*, and *Tiquilia.*

bus; genitalibus sublonge exsertis. — Sandwich Islands, on Mouna Haleakala, East Maui, alt. 5,000 – 7,000 feet. A most striking and distinct species: corolla an inch long, somewhat pubescent.

PHYLLOSTEGIA, Benth. An examination of the now extant materials of this Sandwichian genus leads to the suppression of four of Bentham's species, and the establishment of as many new ones. Two of the latter constitute a peculiar section, and *P. floribunda* may be taken for another. The sections, and a key to the species, may be presented as follows: —

§ 1. GENUINÆ. Racemi verticillastriflori, nempe verticillastri 6 – 20-flori in racemo caulem terminante dispositi, vel infimi (nunc lusu omnes) axillares. Corollæ albæ.

Calycis lobi tubo æquilongi foliacei, amplissimi: hirsutissima. *P. vestita.*
Calycis lobi tubo pl. m. breviores:
  Fructiferi ampliati, explanato-patentes, foliacei. Pedicelli calycem sericeo-pubescentem subæquantes. *P. grandiflora.*
  Fructiferi haud explanato-patentes (*P. racemosa* forte excepta).
    Glabra: pedicelli graciles.
      Verticillastri pluriflori, haud pedunculati. *P. brevidens.*
      Verticillastri 6-flori, cymulis sæpius pedunculatis! *P. glabra.*
    Hirsutissima: pedicelli breves. *P. hirsuta.*
    Molliter pubescens seu villosa.
      Pedicelli graciles calyce sæpissime longiores: pili patentes. *P. parviflora.*
      Pedicelli calycem cum corolla strigoso-pubescentem subæquantes. *P. clavata.*
      Pedicelli brevissimi plurimi.
        Calycis lobi subulato-lanceolati tubum subæquantes. *P. stachyoides.*
        Calycis lobi ovati, obtusi, tubo breviores. *P. racemosa.*

§ 2. LATERIFLORÆ. Racemi simpliciflori (pedicellis solitariis), breves, ex axillis foliorum inferiorum. Corollæ violaceæ, parvæ.

Lobi calycis hirsutissimi, tubo æquilongi, lineares. *P. floribunda.*

§ 3. HAPLOSTACHYÆ. Spica simpliciflora terminalis, nuda. Corollæ albæ, tubo longo, lobis subæqualibus crispis. Folia subtus cano-tomentosa.

Folia basi sat cordata: calycis dentes angusti, acuti. *P. haplostachya.*
Folia basi vix cordata: calyx repando-truncatus. *P. truncata.*

PHYLLOSTEGIA VESTITA, Benth. (racemo laxiore folioso,) takes in *P. dentata*, Benth., racemo denso nudo, foliis floralibus plerisque calyces fructif. haud superantibus.

PHYLLOSTEGIA GRANDIFLORA, Benth. To this, I suspect, belongs Gaudichaud's *Prasium macrophyllum* also, but not Bentham's *Phyllostegia macrophylla*, at least as to Macrae's plant, from which his description is principally drawn, and which I take for a form of *P. parviflora.*

PHYLLOSTEGIA BREVIDENS (sp. nov.): glabra; foliis ovalibus argute dentato-serratis; racemo laxo brevi simplici, verticillastris multifloris; calyce quasi truncato, dentibus brevissimis obtusis erectis; corollæ tubo dorso pubescente calyce duplo longiore (semipollicari). — Hawaii, in the forest of Mouna Kea, alt. 3,000 feet. Inflorescence as in *P. grandiflora* (except in the smoothness), i. e. the pedicels sessile or nearly so; but more numerous, from 7 to 11 in each cymule.

Var. ? β. AMBIGUA: calyce glaberrimo magis dentato, dentibus tubo quadruplo triplove brevioribus; corollæ tubo calyce triplo longiore (subpollicari); foliis subtus nunc parce pilosis. — West Maui. This is ambiguous between *P. brevidens* and *P. grandiflora*, having the corolla about the size and shape of the latter, and most of the leaves are sparingly pilose beneath. But the latter are sharply serrate, the calyces, pedicels (about 5 in each cymule), &c. are perfectly glabrous, and the calyx-teeth, although manifest and of the same form as those of *P. grandiflora*, are much shorter and hardly spreading. There is reason to suppose that this may be the same as a specimen which Menzies collected on Maui, which is preserved in the herbarium of the British Museum, and which Bentham referred to his *P. Chamissonis.* In which case, if of a distinct species, as is likely, it should be named *P. Menziesii.*

PHYLLOSTEGIA GLABRA (Benth.): undique glaberrima; foliis ovatis serratis basi rotundatis vel truncatis; racemo laxo thyrsoideo, cymulis plerisque pedunculatis trifloris; lobis calycis parvulis breviter lanceolatis tubo dimidio brevioribus, fructiferis vix ampliatis subpatentibus; corollæ tubo calyce 2 – 3-plo longiore. Variat calycis lobis angustioribus acutis, seu latioribus obtusis vel obtusiusculis, fructiferis haud raro tubo æquilongis; corolla subpollicari vel dimidio minore. — Gaudichaud's plate of *Prasium glabrum* represents the largest-flowered form of this species. Bentham's *Phyllostegia glabra*, in Bot. Reg. and in Linnæa, was described from branched specimens with smaller and probably later flowers; his *P. Chamissonis*, from a larger-flowered form. The corolla varies much in size, but I have never seen it rival that of *P. grandiflora.* I am persuaded, accordingly, that Bentham's *P. Macræi* and *P. Chamissonis* must merge under the original name, *P. glabra.* The species is the only one with pedunculate cymules, except the following.

PHYLLOSTEGIA HIRSUTA, Benth. This is known only by deflorate specimens of Macrae's collection; but it is probably of this genus.

PHYLLOSTEGIA PARVIFLORA (Benth.): molliter villosula vel pubescens; foliis ovatis seu ovato-oblongis serrato-crenatis basi rotundatis cordatisve; racemo laxo glanduloso- seu viscoso-villoso; verticillastris plerumque 6-floris, pedicellis gracilibus; calycis lobis breviter lanceolatis tubo 3–4-plo brevioribus, fructiferis vix ampliatis subpatentibus; corollæ tubo puberulo calyce 2–3-plo longiore (semipollicari). — Under this I combine the following: —

Var. α. GAUDICHAUDI (*P. parviflora*, Benth.): foliis subtus molliter seu mollissime pubescentibus; racemis sæpe paniculatis; floribus parvulis; corolla gracili; pedicellis sæpius calyce (1½ lin.) multo longioribus (3–6 lin.) nunc tantum æquilongis.

Var. β. GLABRIUSCULA (*P. macrophylla*, Benth., præsertim pl. Macræi): foliis cauleque subpubescentibus vel glabratis; floribus majoribus; pedicellis calyce (2–3 lin.) 2–3-plo longioribus; verticillastris interdum 8-floris.

Var. γ. MOLLIS (*P. mollis*, Benth.): undique mollissime velutino-pubescens, canescens; pedicellis calyce brevioribus vel subæqualibus; corolla (4–5 lin.) calyce duplo longiore.

PHYLLOSTEGIA STACHYOIDES (sp. nov.): molliter pubescens; foliis ovato-lanceolatis acuminatis vix basi subcordatis crenato-serratis; racemo denso; verticillastris 10–14-floris; pedicellis calyce brevioribus; lobis calycis glandulosi-puberuli subulato-lanceolatis tubo paullo brevioribus; corollæ pubescentis tubo calyce duplo longiore. — Hawaii, in the district of Waimea. Leaves much like those of *P. racemosa*, but tapering to an acute point, and scarcely at all cordate.

PHYLLOSTEGIA CLAVATA (Benth.): pubescens vel hirsuta pilis appressis, foliis ovatis seu ovato-lanceolatis subacutis basi rotundatis vix subcordatis crenato-serratis; verticillastris 6–14-floris, pedicellis calyce subæquilongis; lobis calycis strigosi late triangulari-ovatis obtusis tubo triplo brevioribus; corolla strigoso-pubescentis tubo calyce triplo longiore; stylo apice clavato. Variat 1. foliis glabriusculis pedicellis fructiferis 2–3-plo longioribus, 2. sericeo-villosa, canescens, lobis calycis paullo majoribus. — Style more clavate than usual at its summit, the upper lobe smaller and its stigma often abortive.

PHYLLOSTEGIA RACEMOSA (Benth.): villosula seu tomentoso-pubescens; foliis oblongis ovato-lanceolatisve obtusis basi sæpissime cordatis crenatis; verticillastris 8–12-floris; pedicellis brevissimis; lobis calycis tomentulosi ovatis obtusissimis tubo dimidio brevioribus, fructiferis auctis patentibus; corolla pubescente calyce duplo longiore. — Branches of the style often unequal, the upper one being smaller, as in the preceding.

PHYLLOSTEGIA HAPLOSTACHYA (sp. nov.): cano-tomentosa; foliis cordato-oblongis seu cordato-lanceolatis crenatis; verticillastris bifloris; floribus subsessilibus in spicam simplicem virgatam digestis; calycis dentibus lato subulatis erectis tubo 3 – 4-plo brevioribus; corollæ tubo longe exserto, lobis crispis. — Maui, on the sands of the low isthmus. Also gathered by Remy on Hawaii. Calyx 3 or 4 lines long, cylindraceous, a little curved, and the flower horizontally spreading in anthesis. Corolla white; the tube 8 or 9 lines long, the lips less unequal than in other species, the upper one and the three lobes of the lower lip rotund and with strongly undulate-crisped margins. Style of the genus. So of the fruit, which is apparently drupaceous when fresh, but is included in the ovoid and nearly closed fructiferous calyx.

Var. β. LEPTOSTACHYA: foliis angustioribus e basi minus cordata, pagina superiore calycibusque minutim tomentulosis nec incanis; floribus inferioribus dissitis. — On barren ridges of Kauai; in flower.

PHYLLOSTEGIA TRUNCATA (sp. nov.): tomentulosa; foliis lanceolatis crenulatis basi truncatis vel subcordatis subtus incanis; verticillastris bifloris; floribus in spicam simplicem digestis brevissime pedicellatis, infimis dissitis; calyce puberulo glanduloso repando-truncato, dentibus brevissimis latis obtusissimis; corollæ tubo elongato, lobis rotundatis subæqualibus crispis. — Maui, Coll. Remy, no. 395. Closely related to the preceding. The two would be taken for the type of a distinct genus; but I find no sufficient reason for their separation.

PHYLLOSTEGIA FLORIBUNDA (Benth.): villoso-hirsuta; caule rigido (bipedali); foliis ellipticis seu oblongo-ovatis acuminatis crenato-serratis basi rotundatis vel obtusis; racemis brevibus plurifloris ex axillis fol. inf., rhachi pedicellis filiformibus calycibusque patenti-hirsutissimis; lobis calycis linearibus tubo suo et corollæ "late violaceæ" subæquilongis. — Hawaii, in woods of the district of Puna. Before known only from the specimen gathered (probably on Hawaii) by Nelson in Cook's last voyage, and preserved in the Banksian herbarium. Achenia fleshy, projecting from the open mouth of the fructiferous calyx.

STENOGYNE, Benth., is the other Labiate genus peculiar to the Sandwich Islands. In all the species the corolla is more or less hairy or downy externally towards its summit, while the lower part of the

tube is apt to be glabrous or glabrate. The color is mostly rose or pink. The lips, indeed, are often "subæqual"; but it is the upper (not the lower) lip which surpasses the other, sometimes strikingly so when fully developed. This is especially the case in the small-leaved section, where the erect or falcate upper lip, produced much beyond the short and 3-cleft lower one, calls to mind the corolla of a *Castilleia.* The bearded annulus is wanting in *S. rotundifolia*, *S. cordata*, and nearly so in what I take to be *S. macrantha*, therefore probably in *S. sessilis.* The stamens equal the upper lip, or are exserted beyond it. The following conspectus of the species will be convenient.

* *Corolla exannulata. Verticillastri sæpius* 6-*flori.*

Folia longius petiolata: nervi calycis obsoleti.
  Hirsuto-hispida: calyx 5-fidus: cor. lab. superius productum. *S. macrantha.*
  Glabrata: calyx breviter dentatus: corollæ labium superius inferiori vix longius: filamenta villosa! *S. rotundifolia.*
Folia vix petiolata, glabra: calyx nervosus, 5-lobus.
  Folia subpetiolata: calycis lobi acuti. *S. cordata.*
  Folia arcte sessilia: calycis lobi lati obtusi. *S. sessilis.*

* * *Corolla villoso-annulata.*

Folia majora, longius petiolata: verticillastri sæpius 6-flori: labia corollæ subæquilonga vel superius paullo longius.
  Calycis nervi obscuri, dentes breves obtusi. Folia submembranacea.
    Subglabra, caule angulis hirsutis: folia rotundata: pedicelli calycem vix æquantes. *S. calaminthoides.*
    Glabra: folia ovata, acuta: pedicelli calyce longiores. *S. scrophularioides.*
  Calycis præsertim fructiferi nervosi, lobi acuti: folia rigida.
    Erecta: folia ovata seu oblonga. *S. rugosa.*
    Procumbens: folia oblongo- seu lanceolato-linearia: verticillastri biflori. *S. angustifolia.*
Folia parva, plerumque petiolata: caules ramosissimi diffusi: verticillastri biflori: corollæ (viridulæ) fauce minus ampliatæ, labium superius insigniter productum: stamina exserta. (*Microphyllæ.*)
  Glabra: folia acute serrata vel incisa, basi angustata. *S. microphylla.*
  Hispida: folia oblonga, obtusa, grosse crenata. *S. crenata.*
  Villoso-pubescens: folia rotundata, basi truncata vel subcordata, grosse crenata. *S. diffusa.*

STENOGYNE MACRANTHA (Benth.?): pilis patentibus undique molliter hispida; foliis subrotundis vel ovatis crenatis basi sæpius cordatis submembranaceis longiuscule petiolatis; verticillastris 6-floris; pedicellis calyce 5-lobo æquilongis, utrisque hispidis; filamentis subnudis;

corolla (subpollicari!) fere exannulata extus sericea.—The above character is drawn from no. 381 of Remy's collection, from Hawaii. It does not accord in several particulars with the character of Bentham's *S. macrantha,* drawn from a single specimen collected by Macrae. That is stated to have corollas an inch and a half long, "labio superiore vix inferiore breviore." In Remy's specimens the lower lip is decidedly shorter than the upper, the dilated orifice oblique.

STENOGYNE ROTUNDIFOLIA (sp. nov.): caulibus basi suffruticosis acute tetragonis ad angulos præsertim cum petiolis retrorsum hirsutis; foliis glabratis rotundis crenatis basi truncatis vix subcordatis pollicaribus; verticillastris 6-floris; pedicellis petiolo dimidio brevioribus calyce glabro breviter dentato subæquilongis; filamentis villosis; corolla (10 lin. longa) exannulata intus villosa. — Mouna Haleakala, E. Maui.

STENOGYNE CORDATA (Benth.): glabrata vel præter nodos barbatos glabra; foliis subpetiolatis ovatis basi pl. m. cordatis (pollicaribus) crenulatis; verticillastris 2 – 6-floris; pedicellis brevissimis; calyce inæquali, lobis acutis, anticis tubo subæqualibus; corolla exannulata, labiis fere æquilongis. — Hawaii and W. Maui.

STENOGYNE SESSILIS, Benth., nearly related to the last, has been found only by Menzies. The specimens in the Banksian and Hookerian herbaria have larger, rounder, more rugose, and more closely sessile leaves than *S. cordata,* the stem hairy on the angles, the lobes of the calyx broad and obtuse, and the downy corolla larger.

STENOGYNE CALAMINTHOIDES (sp. nov.): subglabra; caulibus decumbentibus vel repentibus tetragonis ad angulos retrorsum hirsutis; foliis rotundo-ovatis crenatis basi subcordatis truncatisve longiuscule petiolatis subflaccidis (1 – 2-poll.); verticillastris 6 – 8-floris; pedicellis calycem vix æquantibus; dentibus calycis obtusis brevissimis; corollæ elongatæ superne puberulæ (ultrapollicaris) labiis fere æquilongis. — Hawaii, in the forests of Mouna Kea, &c. Allied both to *S. rotundifolia* and to *S. scrophularioides.*

STENOGYNE SCROPHULARIOIDES (Benth.): glabra, divaricato-ramosa; foliis ovatis acutis serratis basi rotundatis vel truncatis subflaccidis, petiolo gracili; verticillastris sæpissime 6-floris; pedicellis calyce breviter dentato longioribus; corollæ superne pubescens labiis subæquilongis. — Hawaii.

Var. β. foliis oblongo-ovatis sæpius acuminatis argutius serratis floribusque majoribus. *S. Nelsoni,* Benth. *Phæopsis montana,* Nutt. — Hawaii and Oahu.

STENOGYNE RUGOSA (Benth.): sæpius glabra vel glabrata; foliis coriaceis rigidis oblongis seu ovato-oblongis basi rotundatis vel truncatis petiolatis crenato-serratis reticulatis nunc rugulosis; verticillastris plerumque 6-floris; pedicellis calyce brevioribus; calyce subinæquali, lobis sæpius mucronato-acutis vel acutissimis tubum subæquantibus; corollæ breviusculæ labio inferiore paullo breviore. — Variat, 1. fere omnino (corolla excepta) glaberrima, lævis, seu pedicellis calycibusque hirsutulis: 2. hirsutula vel hispidula, foliis nunc rugosis asperulis: 3. pube brevi molli induta, verticillastris 6 – 10-floris. — Hawaii, brought by most collectors.

STENOGYNE ANGUSTIFOLIA (sp. nov.): glaberrima; caulibus filiformibus sarmentosis sæpius procumbentibus; foliis coriaceis oblongo-linearibus seu lineari-lanceolatis crenulato-serratis basi in petiolum angustatis; verticillastris bifloris; floribus fere *S. rugosæ*, lobis calycis inferioribus tubo paullo longioribus; corolla glabrata. — Hawaii, in the district of Waimea. Possibly an extreme form of the preceding.

STENOGYNE MICROPHYLLA (Benth.): glabra, diffuso-ramosissima, subscandens; foliis parvis ($\frac{1}{4}$ – $\frac{1}{2}$-poll.) oblongis grosse serratis vel incisis basi in petiolum marginatum angustatis; verticillastris bifloris; corolla extus puberula, labio superiore falcato longe producto; staminibus exsertis. — Hawaii.

STENOGYNE CRENATA (sp. nov.): hispida, ramosissima, foliosissima; foliis parvis oblongis seu ovalibus obtusis grosse crenatis breviter (nunc brevissime) petiolatis; verticillastris bifloris; corolla extus hispida, labio superiore longiuscule producto; staminibus exsertis. — Maui, on Mouna Haleakala. Differs from the preceding in the hispid hairiness, which is retrorse and aculeolate on the acute angles of the stems, in the blunt and crenate leaves, less unequal lips of the corolla, &c.

STENOGYNE DIFFUSA (sp. nov.): molliter villoso-pubescens, divaricato-ramosissima; foliis parvis rotundis grosse crenatis basi truncatis vel subcordatis ($1\frac{1}{2}$ – 2 lin. latis) petiolatis; verticillastris bifloris; calycis lobis obtusis; corolla extus pubescente, labio superiore longe producto; staminibus exsertis. — Hawaii, in forests of the district of Waimea.

A specimen of what may be still another species of this small-leaved section was gathered on East Maui, with ovate-subcordate or deltoid leaves, incisely lobed, and with the diffuse branches cinereous-pubescent; but the flowers and fruit are unknown.

TEUCRIUM ARGUTUM, R. Br. var. PINNATIFIDUM: foliis laciniato-pinnatifidis fere bipinnatifidis. — Hunter's River, New South Wales.

The no. 359 of Seemann's Feejee collection, inadvertently named *Coleus atropurpureus*, is *Plectranthus Forsteri*.

Acanthaceæ.

ERANTHEMUM LAXIFLORUM (sp. nov.): glaberrimum; foliis ovato- seu lanceolato-oblongis sæpius acuminatis acumine obtuso; pedunculis axillaribus petiolo longioribus cymoso-tri-multifloris; bracteis oblongis parvis herbaceis; pedicellis calyce longioribus; laciniis calycis setaceo-subulatis tubo brevissimo pluries longioribus; corolla "cærulea" hypocraterimorpha, lobis ovalibus. — Sandalwood Bay, &c., Feejee Islands. A showy species, of the same group as *E. bicolor;* "shrub six feet high, ornamental." The color of the flowers, "blue," is stated on the authority of Dr. Pickering's notes. This and the following mixed were distributed by Dr. Seemann under the name of "*Graptophyllum hortense*," — which throws much doubt on the assigned difference in color.

ERANTHEMUM INSULARUM (sp. nov.): glabrum; foliis ovatis lanceolatisve obtuse acuminatis; pedunculis axillaribus seu ramos terminantibus brevibus 1-3-floris; bracteolis minutis; calycis laciniis subulatis tubo duplo triplove longioribus; corolla "purpurea" infundibuliformi, lobis oblongis. — Feejee Islands, "frequent and sometimes cultivated; an ornamental shrub, six feet high, with purple flowers." Vavau and Lifuka, Friendly Islands, Prof. Harvey. Perhaps varying into the preceding. Is *Justicia longifolia*, Forst. (*J. sinuata*, Soland., appended by Nees to *Anthacanthus*) a congener of the above?

CHÆTACANTHUS REPANDUS: glaber, elatus (fruticosus?); foliis ovato-lanceolatis seu oblongis acumine obtuso repandis sinuatisve membranaceis; pedunculis cymoso-paucifloris; corolla extus calyceque minutim pubescentibus. *Justicia repanda*, Forst.? *Eranthemum repandum*, Rœm. & Schult.? *Anthacanthus repandus*, Nees in DC.? — Ovolau, Feejee Islands. The small flowers, anthers, &c. correspond with the Cape species, upon which Nees founded his *Chætacanthus*.

DICLIPTERA CLAVATA, Juss. Our materials from Tahiti barely suffice to show that the plant is of this genus. The apparent contradiction in Vahl's description, which puzzled Nees (Prodr. 11. p. 490), is readily harmonized by noting that the word "bracteis" in the diagnosis refers to the involucral valves, but in the appended remarks it applies to those bracts which subtend the ramifications.

Gesneriaceæ, Cyrtandreæ.

Of *Cyrtandra biflora*, Forst., from Tahiti, the original of the genus, I have nothing to remark. The species inhabiting the Sandwich Islands I have been able to study under favorable circumstances; the substance of the revision is presented in the following analysis and diagnoses.

Cyrtandræ Sandwicenses.

1. Flores mediocri, ultra-semipollicares.

Folia cordata, ampla.	
Calyx rotatus, lobis ovatis: ovarium villosum.	*C. cordifolia.*
Calyx campanulatus, lobis lanceolatis: ovarium glabrum.	*C. platyphylla.*
Folia utrinque acuta vel acuminata.	
Calyx crateriformis breviter 5-lobus.	*C. Pickeringii.*
Calyx cylindricus, breviter 5-lobus.	*C. grandiflora.*
Calyx campanulatus vel cylindraceus, 5-fidus.	
Pedunculus communis brevissimus.	*C. paludosa.*
Pedunculus pedicellis æquilongus.	*C. triflora.*
Calyx 5-partitus: folia utrinque viridia.	Var. *lysiosepala.*
Calyx 5-partitus: folia subtus ferrugineo-sericea.	*C. Lessoniana.*

2. Flores parvi, haud semipollicares.

Folia elliptica, subtus canescenti-velutina: calyx 5-fidus.	*C. Garnotiana.*
Folia lato ovata, subtus pruinoso-canescens; calyx 5-partitus, lobis lanceolatis.	*C. Macræi.*
Folia utrinque viridia, oblonga seu lanceolata: calyx 5-partitus, lobis setaceis elongatis.	*C. Menziesii.*

CYRTANDRA CORDIFOLIA (Gaud.): villosissima; foliis rotundo-ovatis cordatis acuminatis argute dentatis supra hirsutis subtus calycibusque dense tomentoso-villosis subincanis (5 – 7-poll.); pedunculis plurifloris; calyce rotato angulato-quinquefido fere æquali corollam subæquantibus, lobis late ovatis acuminatis; ovario cum stylo brevissimo villoso. — Oahu. Gaudichaud's plate pretty well represents this species, except that the shaggy pubescence is omitted, the leaves are not large enough, and the rotate calyx not expanded.

CYRTANDRA PLATYPHYLLA (sp. nov.): foliis subrotundo-cordatis breve acuminatis (5 – 9 poll. latis) argute denticulatis supra hirsutulis subtus canescenti-pubescentibus, costis cum petiolis ramis calycibusque pube ferruginea villosis; pedunculis plurifloris; calyce inæqualiter quinquefido, lobis lato-lanceolatis corolla brevioribus; ovario cum stylo gracili glaberrimo. — Hawaii, in forests. Stem 10 feet high.

CYRTANDRA PICKERINGII (sp. nov.): ferrugineo-villosa; foliis oblongo-lanceolatis utrinque acuminatis subserrulatis supra hirsutis subtus

(præter costas villosas) fulvo- vel canescenti-pubescentibus; pedunculis 3 – 5-floris; calyce crateriformi subæqualiter breviter 4 – 5-lobo corolla breviore, lobis late deltoideis. — Mountains of Oahu. Except for the calyx (which is ampliate in the manner of *C. cordifolia*, but crateriform or cyathiform rather than rotate, and much less lobed), and the soft fulvous down of the lower surface of the leaves, this might be taken for a variety of the next species.

CYRTANDRA TRIFLORA (Gaud.): glabrata vel primum ferrugineo-hirsuta; foliis oblongis seu ellipticis utrinque acutis vel acuminatis serrulatis serratisve utrinque viridibus; pedunculis brevibus 2 – 5-floris; calyce subæqualiter 5-fido cylindraceo, lobis lato-lanceolatis corolla brevioribus.

Var. *α*. GAUDICHAUDI: ramis foliisque præter costam venasque paginæ inferioris ferrugineo-pubescentes glabris; calycis lobis tubo æquilongis. — Oahu, Hawaii.

Var. *β*. ARGUTA: ramulis cum inflorescentia ferrugineo-hirsutis; foliis majoribus ovalibus caudato-acuminatis crebre argutissime serratis hirsutulis; calycis (etiam fructiferi hirsuti) lobis tubo brevioribus. — Hawaii, in mountain forest.

Var. *γ*. LYSIOSEPALA: calyce fere 5-partito; cæt. var. *β*. — Hawaii, in deep forest.

CYRTANDRA GRANDIFLORA (Gaud.): foliis oblongis seu ovatis utrinque acuminatis subintegerrimis glabratis subtus pallidis puberulis, costa venis petioloque pube brevissima ferrugineis; pedunculo 1 – 2-floro bracteis foliaceis; calyce cylindrico breviter 5-lobo hinc sæpe profundius fisso corolla glabra paullo breviore. — Oahu. Calyx, when well developed, an inch long; teeth three lines long. To this probably belong *C. Endlicheriana*, Nees, and *C. Ruckiana*, Meyen and Walpers.

CYRTANDRA PALUDOSA (Gaud.): "suffruticosa," glabra; foliis oblongis sublanceolatisve utrinque acuminatis serratis subtus pallidis; pedunculis brevissimis nudis 1 – 5-floris; calyce cylindraceo-campanulato inæqualiter 5-fido, lobis triangulari-acuminatis, anticis tubo æquilongis; corolla glabra; fructu olivæformi. — This is most related to *C. grandiflora*, but is glabrous in the adult state, only the nascent leaves, &c. ferrugineous-pubescent.

CYRTANDRA LESSONIANA (Gaud.): foliis oblongis utrinque sæpius acuminatis denticulatis supra hirsutulis subtus cum ramis pedunculisque pube adpressa ferruginea sericeis; pedunculis elongatis 1 – 3-floris; bracteis lanceolatis; calyce 5 – 6-partito; lobis ovatis seu ovato-lanceo-

latis corolla extus sericeo-villosa brevioribus vel demum æqualibus laxis; fructu ovato. — Oahu.

Var. β. calycis lobis elongato-lanceolatis; corolla subglabrata. — West Maui.

The deeply-parted divisions of the calyx are at first considerably shorter than the corolla, but they enlarge with age: at first silky-villous and ferrugineous, when old they are glabrate; they are not always so broad as Gaudichaud represents them, nor with such undulate reflexed margins; sometimes they become merely broad-lanceolate; in the variety from Maui they are still narrower, and then occasionally six. Corolla white or greenish, as in all these species.

CYRTANDRA GARNOTIANA (Gaud.): foliis ellipticis vel obovatis utrinque sæpius anguste acuminatis denticulatis supra hirsutulis subtus cum inflorescentia ramisque canescenti-velutinis; pedunculis gracilibus 3 – 5-floris; bracteis parvis; calyce campanulato subæqualiter 5-fido, lobis triangularibus tubo subæquilongis corolla extus hirsuta (4 – 5 lin. longa) subdimidio brevioribus. — Oahu. One of the small-flowered species. The fruit is figured by Gaudichaud as ovate.

CYRTANDRA MACRÆI (sp. nov.): foliis lato-ovatis acuminatis denticulatis supra glabris subtus ramulisque novellis pruinoso-incanis, venis pubescentibus; pedunculis brevissimis cymoso-multifloris; calyce æqualiter 5-partito corolla pruinosa fructuque ovoideo multo breviore, lobis e basi lata lanceolatis. — Oahu, gathered by Macrae (1825), Gaudichaud (in voyage of the Bonite), and by Brackenridge. "Shrub 10 feet high," but the branches collected are herbaceous. Leaves 4 to 8 inches long by 3 to 6 wide. Bracts minute. Flowers very small for the genus; corolla 4½ lines long. Stamens not examined, only a single flower having been seen. Pistil of the genus. Immature fruit 4 lines long, conical-ovoid or ellipsoidal, probably more or less fleshy.

CYRTANDRA MENZIESII (Hook. & Arn. Bot. Beech., p. 91, adn.): subglabra; foliis quaternis (an semper?) oblongis seu lanceolatis utrinque acuminatis serrulatis; pedunculis petiolo brevioribus umbellato-plurifloris; calyce 5-partito, lobis elongatis subulato-setaceis corolla vix semipollicari paullo brevioribus; fruct. fere *C. Macræi.* — Not in our collection, but found by Gaudichaud in the voyage of the Bonite.

As to the species of the Feejee Islands, the collection of the American Expedition contains only three or four of the eight enumerated by Dr. Seemann, the characters of which he is about to publish.